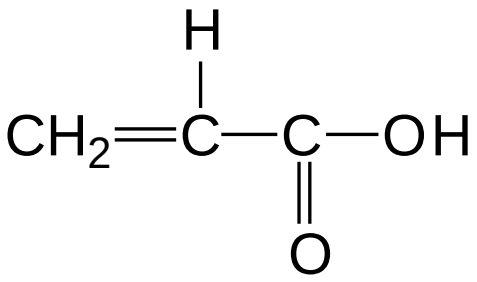
ACRYLIC ACID (AA)

2-Propenoic acid

Cas number: 79-10-7

EINECS number: 201-177-9

CHEMICAL FORMULA



Molecular weight : 72

SPECIFICATIONS

	SPECIFICATION	METHOD
Appearance (at > 13°C)	Clear liquid	Visual
Colour (APHA)	10 maximum	ASTM D1209
Purity	99.5 % minimum	Gas Chromatography
Water content	1000 ppm maximum	ASTM D1364
Dimer content (ex works)	2000 ppm maximum	HPLC
Inhibitor content (MEHQ)	180 to 220 ppm	UV Spectroscopy

HANDLING AND SAFETY ADVISES

We advise you to read carefully the safety data sheet.

ACRYLIC ACID (AA)

2-Propenoic acid

MAIN PHYSICAL PROPERTIES

Molecular weight	72 g/mol
Boiling point, at 1013 mbar	141 °C
Freezing point, at 1013 mbar	13 °C
Specific gravity at 20°C	1.05 g/mL
Refractive index, n_D at 20°C	1.422
Viscosity at 20°C	1.22 mPa.s
Solubility water in AA at 20°C	infinite
AA in water at 20°C	infinite
Specific heat in liquid state	2.05 kJ/kg °C
Latent heat of vaporization	634 kJ/kg
Heat of polymerization	1077 kJ/kg
Flash point in closed cup	48.5 °C
Vapour pressure at 20°C	4 mbar
Auto-ignition temperature	.438 °C

PACKAGING

Acrylic acid is delivered:
- in 25000 to 36000 liters stainless steel road tankcars
- in 25000 to 35000 liters stainless steel containers

STORAGE

The standard inhibition is 200 ppm Monomethyl Ether of HydroQuinone (MEHQ).

Acrylic acid should be stored in a place with a temperature range of 15 to 25°C and away from light, to prevent any crystallization and to ensure proper distribution of stabilizer.
It must also be stored under air atmosphere, as the presence of oxygen (minimum 5% vol.) is essential to activate the stabilizer.

If crystallization occurs, acrylic acid can be safely thawed by circulation of tempered water limited to 35°C through heating coils. During thawing, acrylic acid should be well mixed to ensure that dissolved oxygen and the inhibitor are well distributed in the product.

Avoid any localized overheating of the acrylic acid above 25°C, a too high temperature could cause exothermic polymerization and can be extremely hazardous.

For more detailed information, please consult the brochure “SAFE HANDLING AND STORAGE OF ACRYLIC ACID” produced by the European Basic Acrylic Monomer Manufacturers Association (EBAM).

Acrylic acid should not be stored for excessive periods, because of the irreversible formation of dimers (approximately 100 ppm daily at room temperature).

Under these conditions, the product shall stay within specifications for one month following delivery.

APPLICATIONS

Acrylic acid polymers and copolymers cover a very wide range of applications, such as:
- hydrosoluble agents for dispersing agents thickeners, flocculating and superabsorbent agents
- detergent auxiliaries
- organic synthesis
- copolymer emulsion for paints, varnishes and inks
- dispersions for leather, textiles, non-woven fabrics, glues and adhesives
- cleaning and waxing products
- plastics and synthetic resins
- synthetic rubbers and lattices.

ACRYLIC MONOMERS BU/V8/05.23

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